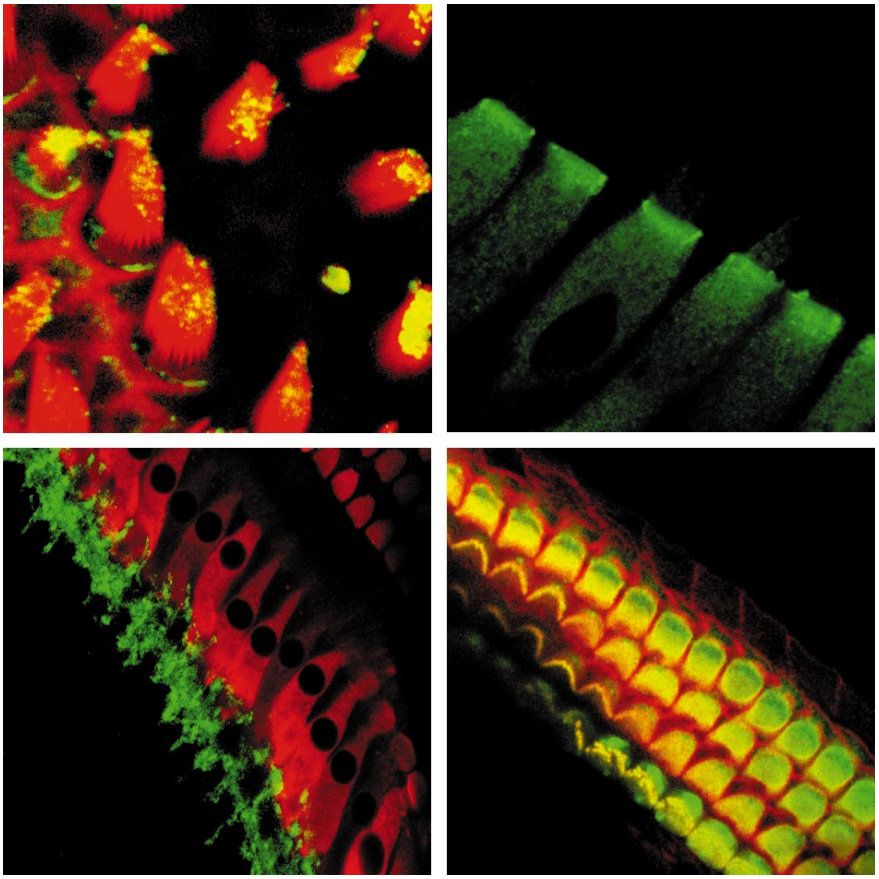
Biology in pictures

Inside the inner ear



There are dozens of different myosin isozymes, though it's not clear why cells require such a diversity. These images of fluorescently-labelled hair cells from the inner ears of frog, guinea pig and mouse show the localization of actin (red at top left and bottom right) and of four different forms of myosin (green, except at bottom left, where myosin VI is labelled in red).

Hair cells are the receptor cells of the auditory and vestibular systems of vertebrates. Their mechanically sensitive hair bundles are composed largely of actin-rich stereocilia. Deflection of the bundles by sound or movement opens ion channels in the tips of stereocilia, depolarizing the cells and causing neurotransmitter release onto auditory nerve fibers (green at bottom left). Each myosin isozyme is located in the same place in hair cells of different species, but they have distinct distributions that are only partially overlapping. One form, myosin I^{β}, is thought to regulate tension on the mechanically sensitive transduction channels. The functions of two others — myosins VI and VIIa — are less clear, but they are essential for the hair cell as mutations in these myosins cause deafness. A fourth, myosin V, resides not in hair cells but in the nerve fibers that contact them.

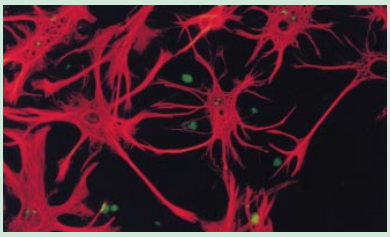
For more details, see Hasson *et al.*, *J. Cell Biol.* 1997, **137:**1287–1307. (Photographs kindly provided by David Corey, Peter Gillespie and Tama Hasson; reproduced with permission from *J. Cell Biol.*)

The 1997 Olympus–*Current Biology* photomicrography competition

Microscopists are in the unique position of being able to encapsulate great science with a single image. The data may be complex, but the visualization can be breathtaking.

Now, Olympus has joined forces with *Current Biology* to offer a state-of-the-art digital camera for the best photomicrograph. We're not just looking for bright colours and strong imagery – though they might help – we want good science simply visualized, in any application, on any system.

The winning entry will receive one of the new Olympus CAMEDIA digital cameras, the first film-free image recording and storage system for the leisure user.



Individuals can submit up to five photomicrographs, each of which should be accompanied by a brief description of the image and be labelled with the name of the person submitting it. Transparencies would be preferred, although high-resolution glossy 10" x 8" prints are also acceptable. The winning image may be required in electronic format. The closing date for entries is 1st December 1997. Full set of rules on request.

Send your images to:
Peter Newmark, The Editor, Current Biology Ltd, 34–42 Cleveland Street, London W1P 6LB, UK.